REMARKS

Claims 1-3 and 5-11 are pending in the application; claim 4 is canceled.

Rejection under 35 U.S.C. 103

Claims 1-11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Lida et al. (2002/0174511 A1)* and *Smick et al. (US 5,490,336)*.

Claim 1 has been amended by including the features of claim 4. The invention as claimed is now directed to a blower having a carrying frame provided with a base plate. A fan with a fan housing is mounted on the carrying frame. The fan housing has an intake opening that faces the base plate and is spaced from the base plate so that an intake gap is formed between the base plate and the fan housing. An internal combustion engine drives the fan in order to take in working air through the intake opening and to blow out the working air through a blower tube. A leaf shield for preventing leaves and debris from entering the fan housing is provided; the leaf shield covers the intake gap. The leaf shield is comprised of a foam material having coarse pores and is embodied as a monolithic foam material block having a central air chamber adjoining the intake opening of the fan housing.

The examiner argues that the reference U.S. 2002/0174511 shows a blower with carrying frame provided with a baseplate. A fan comprising a fan housing is mounted on the carrying frame. The fan housing has an intake opening facing the baseplate and is spaced from the baseplate so that an intake gap is formed between the baseplate and the fan housing. An internal combustion engine is provided for driving the fan to take in working air through the intake opening and to blow out working air through the blower tube. A filter member is located in the intake gap. The examiner states that claims 1-11 differ from the disclosed device only in that a leaf shield that covers the intake gap to prevent leaves or debris from entering the fan housing is missing. According to the examiner, U.S. 5,490,336 provides an air intake filter for electric appliances having a shield 92 covering the intake gap 78 for preventing particulates from entering the fan housing 80. The shield is comprised of foam material having coarse pores (examiner refers to the abstract and details of Fig. 4 as well as the disclosure of col. 2, lines 12-25; col. 5, lines 34-50). In examiner's opinion it would have been obvious to replace filter member 24 of the blower assembly of U.S. 2002/0174511 by a foam shield as taught by U.S. 5,490,336 since the foam shield provides the advantages of protecting appliances from damage by particulate

foreign material (motivation provided according to examiner in col. 1, lines 27-29).

U.S. 2002/0174511 does disclose a leaf shield (it is not called that but has that function according to paragraph 0010: "Debris (e.g., fallen leaves) that is carried in this intake airflow is caught by the filter member...". This leaf shield or filter member is embodied as shown in Figs. 3 and 4.

U.S. 5,490, 336 shows an intake filter for a hair dryer. The filter is comprised of a round and flat foam material blank that can be cut to various sizes (Fig. 1). The cut-to-size foam material can also be formed to a conical configuration as shown in Fig. 2. The foam filter always covers the round intake opening of the fan completely; the air is taken in through the filter material in the axial direction. There is no central air chamber within the filter. The air filter disclosed in U.S. 5,490,336 serves for retaining particles contained in the ambient air (col. 3, line 40). The examiner contends that the foam material has coarse pores in order to retain particles; reference is being had to the abstract and details of Fig. 4 as well as the disclosure of col. 2, lines 12-25; column 5, lines 34-50.

The abstract states that the foam "traps even minute solid and liquid particles"; Fig. 4 shows foam disk 92 with tiny specks indicating the pores; col. 2, lines 12-13 reads that the filters "effectively trap even minute particles". The referenced portions certainly do not indicate a coarse foam material but a foam material having very fine pores so as to be able to trap "minute solid and liquid particles". Moreover, the cited reference discloses specifics in regard to the foam: approximately 20 pores per square millimeter are actually present (col. 3, lines 63-67). This translates to very fine-pore foam material: approximately 4 x 5 pores per sq. mm., i.e., the diameter of the pores must be smaller than 1/5 of a millimeter as there must be material of the foam between the pores.

The present invention concerns a blower, i.e., a device with which, for example, leaves or debris are to be blown off paved areas or lawns. For this purpose, comparatively great blower output is required - a high performance blower operates at an air volume (air flow) of 1,720 cubic meter/hour without tubes (see attached data sheet on Stihl BR 600 Backpack Blower). In comparison, a heavy duty professional hair dryer has an air flow of 69 cubic meter per hour (see attached information on Parlux Professional Ionic Hairdryer).The fine-pored foam filters disclosed in U.S. 5,490,336 are not suitable for achieving the air volume/flow required for a blower (a blower requires about 25 times as

much as the air volume of a hair dryer; see above examples). This is the reason why the use of foam material has not been considered in connection with blowers; instead, the filter materials as disclosed in U.S. 2002/0174511 are commonly used, i.e., materials such as an intake grid 14, 24 with breathing slits/holes 15, 25 (Fig. 3) or a brush structure (Fig. 4).

The examiner contends that the cited reference U.S. 5,490,336 provides motivation to use the disclosed filter in other electrical appliances (col. 1, lines 26-29). The electrical appliances mentioned are drills and sanders; both types of appliances generate fine dust when in operation. In light of the fine-pore structure of the foam designed to trap "minute particles" (having a size of less than 1/5 of a millimeter, as pointed out above), the fine pore foam is useful for sanders and drills in order to keep the fine dust away; but sanders and drills do not convey large air volumes. As set forth above, the fine-pore foam structure is not suitable for leaf blowers that require a large air volume.

The fine-pore filter member of U.S. 5,490,336 is a flat solid disk-shaped body that areally covers a round opening; the flow direction is axial. The filter member of U.S. 2002/0174511 is a circumferentially extending member that covers an annular circumferential opening; the flow direction through the filter member is radial. There is no suggestion in U.S. 5,490,336 to cut a strip from the flat foam material and form the strip into a circular member to be placed peripherally about the gap between base plate 3 and blower. Moreover, for the reasons mentioned above, fine-pore foam material cannot be used in a blower because such a fine-pore foam cannot provide the required air volume/air flow. There is moreover no suggestion in U.S. 2002/0174511 to consider foam material for making the filter member.

The inventors have found that a coarse-pore foam material enables a satisfactory air volume while leaves and debris (large items, not minute particles that can be retained by pores of less than 1/5 millimeter diameter) can be retained by the coarse-pore foam material in a reliable way. In order to achieve a satisfactory air volume it is furthermore provided that the leaf shield is a monolithic block with a central air chamber that adjoins the intake opening of the fan housing and enables easy deflection of the incoming air that enters radially and must change direction so as to enter the fan housing in the axial direction. The configuration of the leaf shield as a monolithic foam material block leads to excellent stability of the leaf shield in itself so that the attachment means of the leaf shield

can be of a simple configuration; attachment is needed only at individual points. Because the leaf shield has a central air chamber, the path of the taken-in air through the monolithic foam material block is comparatively short and this reduces flow resistance. Reduced flow resistance, in turn, enables a satisfactory air flow rate and air volume.

The inventive configuration of the leaf shield as a monolithic foam block made from a coarse-pore foam material and having a central air chamber adjoining the intake opening of the fan housing enables the use of foam material as a leaf shield. U.S. 5,490, 336 does not provide any teaching how the disclosed flat filter disk of fine-pore foam material could be modified in order to use the disclosed filter in a blower. In this connection, there is also no teaching to be derived from U.S. 2002/0174511. The subject matter of claim 1 as amended is therefore not obvious in view of the cited prior art references.

CONCLUSION

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or **e-mail** from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on February 1, 2007,

/Gudrun E. Huckett/

Ms. Gudrun E. Huckett, Ph.D.
Patent Agent, Registration No. 35,747
Lönsstr. 53
42289 Wuppertal
GERMANY
Telephone: +49-202-257-0371
Facsimile: +49-202-257-0372
gudrun.draudt@t-online.de

GEH
Enclosures: - data sheet on Stihl BR 600 Backpack Blower (1 page)
- information sheet on Parlux Professional Ionic Hairdryer (3 pages)